



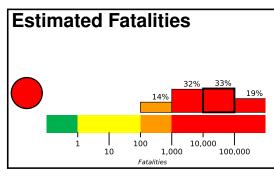


## **PAGER** Version 12

Created: 12 weeks, 1 day after earthquake

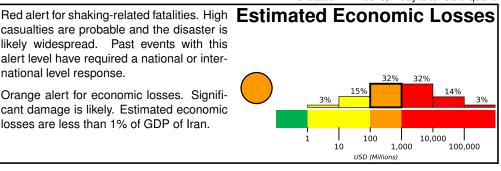
## M 7.3, 29km S of Halabjah, Iraq

Origin Time: 2017-11-12 18:18:17 UTC (Sun 21:48:17 local) Location: 34.9109° N 45.9592° E Depth: 19.0 km



casualties are probable and the disaster is likely widespread. Past events with this alert level have required a national or international level response.

Orange alert for economic losses. Significant damage is likely. Estimated economic losses are less than 1% of GDP of Iran.



## **Estimated Population Exposed to Earthquake Shaking**

Tabriz

laymaniyah

Kahriz

An Nasiriyah

Orumiyeh

ESTIMATED POPULATION EXPOSURE (k=x1000)		_*	2,890k*	7,446k*	33,333k	25,440k	1,435k	156k	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	11-111	IV	V	VI	VII	VIII	IX	X+
PERCEIVED	SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

<sup>\*</sup>Estimated exposure only includes population within the map area.

#### Population Exposure

Siirt

37.6°N

32.9°N

43.2

-Dihok

Al Mawsil al Jadidah

Samarra

Baghdad

population per 1 sq. km from Landscan 5000

48.8 Wankaran

Ardabil

•Zanjan

-Hamadan

Khorramabad

### **Structures**

Overall, the population in this region resides in structures that are highly vulnerable to earthquake shaking, though some resistant structures exist. The predominant vulnerable building types are low-rise nonductile concrete frame with infill and adobe block construction.

# **Historical Earthquakes**

Date	Dist.	Mag.	Max	Shaking
(UTC)	(km)		MMI(#)	Deaths
1962-09-01	357	6.9	IX(4k)	12k
1997-02-28	399	6.1	VIII(3k)	1k
1990-06-20	374	7.4	IX(83k)	45k

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

# **Selected City Exposure**

from GeoNames.org				
MMI	City	Population		
VIII	Javanrud	<1k		
VIII	Sarpol-e Zahab	52k		
VIII	Javanrud	39k		
VIII	Derbendixan	<1k		
VIII	Tazehabad	<1k		
VII	Halabjah	57k		
V	Erbil	933k		
V	Tabriz	1,425k		
V	Baghdad	7,216k		
V	Mosul	1,740k		
Ш	Qom	900k		

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

**V**I⊙Al Kut

https://earthquake.usgs.gov/earthquakes/eventpage/us2000bmcg#pager

bold cities appear on map.

(k = x1000)

Event ID: us2000bmcg